



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,510	03/04/2002	Philip J. Mott	BW-DKT00080A	6034

32175 7590 03/22/2004

BORGWARNER INC.  
POWERTRAIN TECHNICAL CENTER  
3800 AUTOMATION AVENUE, SUITE 100  
AUBURN HILLS, MI 48326-1782

EXAMINER
----------

VAN PELT, BRADLEY J

ART UNIT	PAPER NUMBER
----------	--------------

3682

DATE MAILED: 03/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/090,510

Applicant(s) **SW**

MOTT ET AL.

Examiner

Bradley J Van Pelt

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 5, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over McIntosh (USPN 4,4042,676) in view of Nagin (USPN 3,672,237).

McIntosh discloses a chain for transmission of power from a driving sprocket having teeth to a driven sprocket having teeth comprising: a) a plurality of sprocket-engaged blocks (18) having a body with sides and a thickness therebetween, an upper surface and teeth opposite the upper surface, adapted to engage with the teeth of the driving sprocket and the teeth of the driven sprocket; b) a plurality of guide links (22), each guide link having a body with a thickness, a top surface, a bottom surface, a leading end and a trailing end; each guide link being movably fastened in pairs on opposite sides of the sprocket-engaging blocks to two adjoining sprocket engaging blocks, the guide links being dimensioned so that when the guide links and sprocket-engaging blocks are assembled, the top surfaces of the guide links project further than the top surfaces of the sprocket-engaging blocks, forming rails defining a trough therebetween; all of the guide links and sprocket-engaging blocks fastened together forming a continuous chain; and c) a retaining band (30) running around the chain in the trough, contacting the upper surface of the sprocket engaging blocks; so that when the chain is engaged with the driven sprocket and the

Art Unit: 3682

driving sprocket, and rotational force is applied to the driven sprocket, the force is transferred by the teeth of the driving sprocket to the sprocket-engaging blocks engaged with the driving sprocket,

the guide links are fastened together around the sprocket-engaging blocks by pins (column 2 line 7) running through holes in the guide links and the sprocket-engaging blocks; the retaining band is made of a polymer (see column 2, line 28); the guide link comprises a tapered area forming a lower part of the leading end and trailing end (see fig. 3), to provide clearance as the chain wraps around the sprockets.

McIntosh does not disclose a compression-type chain, when the guide links are aligned in a straight line between the driving sprocket and the driven sprocket the leading end of a guide link contacts the trailing end of an adjoining link, and the leading end and trailing end of the guide links are substantially flat, nor force is transferred to the trailing end of the next guide link from the leading end, until the force is transferred to the sprocket-engaging blocks engaged with the driven sprocket, and thence as a rotational force to the driven sprocket.

Nagin shows a compression-type chain and when the guide links are aligned in a straight line between the driving sprocket and the driven sprocket the leading end of a guide link contacts the trailing end of an adjoining link, and the leading end and trailing end of the guide links are substantially flat (see fig. 1) where force is transferred from leading to trailing ends of the guide links.

To modify the apparatus of McIntosh so as to provide a compression-type chain such that the contacting guide links contact each other when the chain is aligned in a straight line would have been obvious to one of ordinary skill in the art at the time the invention was made in view

Art Unit: 3682

of the teachings of Nagin that such an arrangement improves the compression characteristics of the chain.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over McIntosh in view of Nagin, as applied to claims 1, 2, 5, and 7, further in view of Henderson (USPN 4,595,385).

The above reference combination shows all of the instantly claimed invention, except a plurality of pins running between the pairs of guide links in the trough, retaining the band therein.

Henderson shows disclose a leading end of a guide link contacts the trailing end of an adjoining link a plurality of pins (67) running between the pairs of guide links (ends are considered guide links) in a trough (area between), retaining a band (34) therein.

To modify the above reference combination so as to provide pins between pairs of guides links would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the teachings of Henderson that such an arrangement improves the retaining characteristics of the band within the chain (see column 6, lines 43-45 of Henderson).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over McIntosh in view of Nagin, as applied to claims 1, 2, 5, and 7, further in view of Mott (USPN 5,993,345).

McIntosh discloses a steel band (see column 2, line 27); however fails to show the retaining band comprises a plurality of laminations of steel band.

Mott shows a retaining band (106) comprises a plurality of laminations of steel band.

To modify the above reference combination so as to include laminations of a steel band would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the teachings of Mott that such an arrangement improves loading properties of the chain.

*Response to Arguments*

5. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

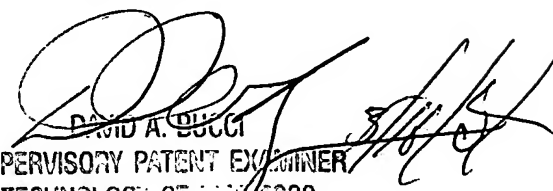
*Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley J Van Pelt whose telephone number is 703.305.8176. The examiner can normally be reached on M-Th 7:00-4:30, 2nd F 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on 703.308.3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BJVP 

  
DAVID A. BUCCI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 6000